



Application No. 10/523,801

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IN THE CLAIMS:

Claim 1 (Currently Amended): A planar light source device comprising:

a primary light source;

a light guide leading light emitted from the primary light source, and having a

light incident face to which the light emitted from the primary light source comes in, and

a light emitting face from which the [[led]] light goes out;

a light deflection element disposed adjacent to the light emitting face of the light

guide; and

a polarization separation element disposed on the side of a light outgoing surface

of the light deflection element, and having a function of transmitting one of polarization

components of an incident light and reflecting the other of the polarization components,

wherein a full width at half maximum of a luminance angular distribution of the incident

light incident upon the polarization separation element in a direction parallel to a travel

direction of the light in the light guide is 25° or less.

Claim 2 (Currently Amended): The planar light source device according to claim 1,

wherein the full width at half maximum of the luminance angular distribution of the

incident light incident upon the polarization separation element in a direction vertical to

the travel direction of the light in the light guide is 50° or less.

Claim 3 (Currently Amended): The planar light source device according to claim 1 [[or

2]], wherein an average value of the full width at half maximum of the luminance angular

distribution of the incident light incident upon the polarization separation element in

directions vertical and parallel to the travel direction of the light in the light guide is 33°

or less.

Claim 4 (Currently Amended): The planar light source device according to claim 1 any

one of claims 1 to 3, wherein the light deflection element has a light incoming surface

positioned facing the light emitting face of the light guide and a light outgoing surface on

the opposite side, and a plurality of elongated prisms extending substantially in parallel

with one another are formed at least on the light incoming surface.

Claim 5 (Currently Amended): The planar light source device according to claim 1 any

one of claims 1 to 3, wherein the primary light source comprises a spot light source, the

light deflection element has a light incoming surface positioned facing the light emitting

face of the light guide and a light outgoing surface on the opposite side, and a plurality of

substantially arc-shape elongated prisms surrounding the primary light source are

juxtaposed and formed at least on the light incoming surface.

Claim 6 (Currently Amended): The planar light source device according to claim 4 [for

5]], wherein each of the elongated prisms of the light deflection element comprises two

prism faces, and at least one of the prism faces is a face other than a single flat face.

Claim 7 (Original): The planar light source device according to claim 6, wherein at least

one of the prism faces includes at least one convex curved face.

Claim 8 (Original): The planar light source device according to claim 7, wherein at least

one of the prism faces comprises at least one convex curved face, and at least one flat

face, an inclination angle of the convex curved face or the flat face positioned on the side

closer to the light outgoing surface is larger, and a difference between the inclination

angle of the convex curved face or the flat face closest to the light outgoing surface and

that of the flat face or the convex curved face most distant from the light outgoing surface

is 15° or less.

Claim 9 (Original): The planar light source device according to claim 7, wherein at least

one of the prism faces comprises at least two convex curved faces having mutually

different inclination angles, an inclination angle of the convex curved face positioned on

the side closer to the light outgoing surface is larger, and a difference between the

inclination angle of the convex curved face closest to the light outgoing surface and that

of the convex curved face most distant from the light outgoing surface is 15° or less.

Claim 10 (Original): The planar light source device according to claim 6, wherein at least

one of the prism faces comprises at least two flat faces having mutually different

inclination angles, an inclination angle of any one of the flat faces positioned on the side

closer to the light outgoing surface is larger, and a difference between the inclination

angle of a flat face closest to the light outgoing surface and that of the flat face most

distant from the light outgoing surface is 15° or less.

Claim 11 (Currently Amended): The planar light source device according to claim 7 any

one of claims 7 to 9, wherein a ratio (r/P) of a curvature radius (r) of the convex curved

face to a pitch (P) of the elongated prism is in a range of 2 to 50.

Claim 12 (Currently Amended): The planar light source device according to claim 8 any

one of claims 8-to 11, wherein at lest two flat faces and/or convex curved faces are

formed in a region having a height h from a prism apex portion, and h/H is 60% or less

assuming that the height of the elongated prism is H.

Claim 13 (Currently Amended): The planar light source device according to claim 8 any

one of claims 8 to 12, wherein a ration ratio of a maximum distance (d) between the flat

face and/or the convex curved face, and a virtual plane connecting a prism apex portion

to a prism bottom portion with respect to the pitch (P) of the elongated prism is in a range

of 0.05 to 5%.

Claim 14 (Currently Amended): The planar light source device according to claim 4 any

one of claims 4 to 13, wherein an apex angle of the elongated prism is in a range of 35 to

80°.

Claim 15 (Currently Amended): The planar light source device according to claim 4 any

one of claims 4 to 14, wherein one distributing angle α of an apex angle of the elongated

prism is 40° or less, and the other distributing angle β of the apex angle is in a range of 25

to 50°.

Claim 16 (Currently Amended): The planar light source device according to claim 4 any

one of claims 4 to 15, wherein one distributing angle α of [[the]] an apex angle of the

elongated prism is different from the other distributing angle β.

Claim 17 (Currently Amended): The planar light source device according to claim 4 any

one of claims 4 to 16, wherein each of the elongated prisms of the light deflection

element comprises two prism faces, one of the prism faces comprises a flat face and/or a

convex curved face, and the other prism face is a substantially flat face.

Claim 18 (Currently Amended): The planar light source device according to claim 1 any

one of claims 1 to 17, wherein a plurality of elongated lenses extending in a direction

substantially vertical to the light incident face of the light guide and arranged

substantially in parallel with one another in a plane along the light emitting face are

formed on one of the light emitting face of the light guide and a back surface on the

opposite side thereof.

Claim 19 (Currently Amended): The planar light source device according to <u>claim 1</u> any one of claims 1 to 18, wherein the polarization separation element comprises a plurality of sheets each having double refractive properties, and a refractive index difference between the adjacent sheets in a polarization direction of a reflected polarization component is smaller than that in a polarization direction of a transmitted polarization component.

Claim 20 (Currently Amended): The planar light source device according to <u>claim 1</u> any one of claims 1 to 19, further comprising:

a light diffusion element disposed on the side of a light emitting surface of the polarization separation element.

Claim 21 (Currently Amended): The planar light source device according to claim 20, wherein the light diffusion element has a full width at half maximum of an emitted light luminous intensity angular distribution with incidence of parallel light in a range of 1 to 13°.

Claim 22 (Currently Amended): The planar light source device according to claim 20 [[or 21]], wherein a haze value of the light diffusion element is in a range of 8 to 82%.